

SEMICONDUCTOR DEVICE AND LIQUID CRYSTAL DISPLAY DEVICE

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Abstract

PURPOSE: To ameliorate the trade-off between various characteristics of wiring materials and to improve the yield at the time of production by using materials formed by incorporating additives of Ti and Ta to Al as the wiring materials for scanning signal lines, video signals and gate terminals.

CONSTITUTION: A gate terminal part 50, a wiring crossing part 51, a TFT and picture element part 52 and an additive capacitor part 53 are formed on a TFT substrate on a transparent glass substrate 10. Gate terminals 11 are connected to chemical conversion bus lines (voltage supply lines). An alloy which consists of the aluminum(Al) as its essential component and contains titanium(Ti) and tantalum(Ta) is used as the electrode material of the gate wirings 12 and signal wirings 18 in the gate terminal part 50, the wiring crossing part 51, the TFT and the picture element part 52 and the additive capacitor part 53. The component ratio adding the titanium and the tantalum is set at 0.8 to 8.5%, by weight %, of the entire part of the alloy.

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